AFFIDAVIT OF MARK A. SCHUBERT
PURSUANT TO 37 CFR § 1.132

I, Mark A. Schubert, declare as follows:

1. I received a M.S. and a Ph.D. in macro-molecular science from Case Western Reserve University. Additionally, I have over 10 years of experience in working with electrochemical cells and, more specifically, sealing members for electrochemical cell components.
2. I am one of the inventors of the invention described and claimed in United States Patent Application Serial No. 10/682,223, filed on October 9, 2003 and entitled "Nonaqueous Cell with Improved Thermoplastic Sealing Member" ("the Schubert Patent Publication"). I am also one of the inventors of the invention described in United States Patent Application Publication No. 2003/0118902, published on June 26, 2003 and entitled "Seal for Electrochemical Cell" (the current patent application). I have personal knowledge as to the subject matter of both of these items.
3. I have read and understand United States Patent No. 5,236,205 to Chen et al. ("the Chen Patent"). As shown at column 5, lines 21-45, and elsewhere throughout the Chen Patent, various admixtures of resin and fibers are disclosed, all of which have ultimate elongations well below 10%. Based on my understanding and experience, the term "ultimate elongation" is synonymous with the term "tensile elongation to break".
4. The Schubert Patent Publication discloses the use of a thermoplastic resin as a sealing member for an electrochemical cell. However, for the reasons discussed in the Schubert Patent Publication, appropriate resins for electrochemical cells must have at a tensile elongation to break of at least 40%, as shown in Figure 6, and the preferred materials in the Schubert Patent Publication have tensile elongation to break of at least 150%.
5. Based on the foregoing, it is my opinion based on my understanding and experience that one of ordinary skill in the art would not find it obvious to use the gasket material disclosed in Chen Patent as a suitable substitute for the materials described in the Schubert Patent Publication because of the disparity in tensile elongation to break values.
6. Moreover, the Chen Patent teaches an automotive seal with an integrally formed bead that deforms in order to have high unit area loadings and to conform to small

imperfections, as discussed at column 5, line 64 through column 6, line 6. Thus, one of ordinary skill in the art would understand the Chen Patent's focus on the shape of the gasket as being the significant aspect of its sealing capabilities. In short, this solution for enhanced sealing taught by the Chen Patent (i.e., formation of a deformation bead for automotive applications) is not applicable to the exigencies of an electrochemical cell.

7. As discussed in my current application, difficulties of compatibility between the electrolyte and the sealing member material, as well as the vapor transmission rate of the sealing member material, are additional reasons why one of ordinary skill in the art could not simply substitute any thermoplastic into the Schubert Patent Publication. In fact, my experience has demonstrated that it is extremely difficult to find thermoplastics that are compatible with the nonaqueous electrolytes contemplated by my current patent application, and it is for this reason that no nonaqueous electrolyte examples were described in the Schubert Patent Publication. Thus, one of ordinary skill in the art would understand that the complexities presented by electrolyte-sealing member compatibility means that it is not necessarily obvious to make a direct substitution of a known sealing member material into one for an electrochemical cell.

Under penalty of perjury, I believe the foregoing to be true and correct as of this 9th day of March, 2007, in Westlake, Ohio.

Mark A. Schubert

[illegible] C. BARAONA, Atty. at Law
NOTARY PUBLIC - STATE OF O[illegible]
My Commission Has No Expiration Date
Sec 147.03 R.C.